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Christopher Richard Uhlik

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ARRAYCOMM/BLAKELY
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EXAMINER

TSEGAYE, SABA

ART UNIT

PAPER NUMBER

2662

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/675,274

Applicant(s)

UHLIK, CHRISTOPHER RICHARD

Examiner

Saba Tsegaye

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10-16, 19-22, 25-27, 30-33, 36-40 and 43-61 is/are rejected.
- 7) ☒ Claim(s) 8, 9, 17, 18, 23, 24, 28, 29, 34, 35, 41 and 42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to the amendment filed 12/09/05. Claims 1-61 are pending. Claims 8, 9, 17, 18, 23, 24, 28, 29, 34, 35, 41, and 42 are objected. Claims 1-7, 10-16, 19-22, 25-27, 30-33, 36-40, and 43-61 are rejected.

Claim Objections

2. Claims 10, 25, 30, and 36 are objected to because of the following informalities:

Claims 10 and 25, last paragraph; it is not clear what is meant by “the timing relationship with the predetermined”.

Claim 30, line 10, the word “terminals” is misspelled.

Claim 36, line10, the word “from” is misspelled. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. Claims 1-3, 10, 12, 19, 20, 25, 26, 30, 31, 36, 37, 43, 47-50, 53-57 and 59-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Persson et al. (US 6,647,000 B1) in view of Parsa et al. (US 2004/0081115 A1).

Regarding claims 1, 10, 30 and 36, Persson discloses a method that transmits a first broadcast message in a broadcast channel at a first specific time within a first assigned slot of a predetermined frame from a first broadcasting terminal (first base station) of a radio communications system, the first broadcast message including a broadcast information sequence; and transmitting a second broadcast message in the broadcast channel at a second specific time

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within a second assigned slot of the predetermined frame from a second broadcasting terminal (second base station) of the radio communications system, the second broadcast message including a broadcast information sequence (column 13, line 60-column 14, line 13). Further, Persson discloses that the synchronization burst is detected by mobile stations to acquire frame synchronization and for base station identification purposes (This means that the mobile station can direct its message to a specific base station (broadcasting terminal) based on base station identification.) (column 11, lines 19-27). However, Persson does not expressly disclose the received message from a user terminal being timed relative to the first broadcast message to distinguish the received message as being directed to the first broadcasting terminal.

Parsa teaches a MS (a user terminal) that receives necessary system parameters (*timing information, control information, downlink transmitted information..*) from continuously transmitted BS broadcast control channel (BCCH), which is broadcast by all base stations (broadcasting terminals). Using the information transmitted from the BCCH the MS can determine various parameters required when first transmitting to a BS. Further, Parsa teaches that **the MS (user terminal) can start transmission at a number of well-defined time-offsets, relative to the frame boundary of a received broadcast channel** (see page 3, 0035, 0038).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Person's communication system by transmitting a message being timed relative to the first broadcast message as taught by Parsa in order to allow the mobile units (user terminals) efficiently utilize the acquired channel and avoid collision (0006, 0009).

Regarding claims 2, 11, 31 and 37, Persson discloses the method further comprising transmitting broadcast messages in the broadcast channel at further specific times within further assigned slots of a predetermined frame from further broadcasting terminals of the radio communications system, the further broadcast messages including a broadcast information sequence (column 5, lines 66-column 6, lines 2; column 7, lines 5-10).

Regarding claims 3 and 12, Persson discloses the method wherein the predetermined frame is a repeating frame (column 8, lines 21-41).

Regarding claim 43, Persson discloses a broadcast channel in a radio communications system, the channel comprising:

- a repeating frame shared by a plurality of broadcasting terminals, the frame having a plurality of slots, each broadcasting terminal being assigned to a slot (column 7, lines 5-10);

- a predetermined timing assigned to each slot, so that each slot of the frame is synchronized at all base stations (column 7, lines 11-20);

- a broadcast burst message for each broadcasting terminals, for transmission in the respective assigned slot, the burst message having a broadcast information sequence (column 7, lines 5-10; column 8, line 64-column 9, line 12). Further, Persson discloses that synchronization burst is detected by mobile stations to acquire frame synchronization and for base station identification purposes (by identifying a specific base station, the mobile station transmits a message to the identified base station (column 11, lines 8-27; column 16, lines 10-21)).

However, Persson does not disclose each slot of the uplink request channel having a timing relationship with the slots of the repeating frame to distinguish uplink requests sent to different ones of several nearby broadcasting terminals.

Parsa teaches a MS (a user terminal) that receives necessary system parameters (*timing information, control information, downlink transmitted information..*) from continuously transmitted BS broadcast control channel (BCCH), which is broadcast by all base stations (broadcasting terminals). Using the information transmitted from the BCCH the MS can determine various parameters required when first transmitting to a BS. Further, Parsa teaches that **the MS (user terminal) can start transmission at a number of well-defined time-offsets, relative to the frame boundary of a received broadcast channel** (see page 3, 0035, 0038).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Person's communication system by transmitting a message being timed relative to the first broadcast message as taught by Parsa in order to allow the mobile units (user terminals) efficiently utilize the acquired channel and avoid collision (0006, 0009).

Regarding claim 47, Persson discloses the channel further comprising a frequency hopping sequence (column 5, line 63-column 6, line 2).

Regarding claim 48, Persson discloses a method for accessing a wireless network, comprising:

receiving a plurality of timing sequences on a broadcast channel, each timing sequence being received from a different one of a plurality of broadcasting terminals (column 8, line 64-column 9, line 12);

determining network timing using the received timing sequences (column 11, lines 8-27); selecting one from among the plurality of broadcasting terminals using the received timing sequences (column 5, lines 66-column 6, lines 2; column 11, lines 8-27). Further, Persson discloses that synchronization burst is detected by mobile stations to acquire frame synchronization and for base station identification purposes (by identifying a specific base station, the mobile station transmits a message to the identified base station (column 11, lines 8-27; column 16, lines 10-21)).

However, Persson does not disclose the received message being timed relative to the first broadcast message to distinguish the received message as being directed to the first broadcasting terminal.

Parsa teaches a MS (a user terminal) that receives necessary system parameters (*timing information, control information, downlink transmitted information..*) from continuously transmitted BS broadcast control channel (BCCH), which is broadcast by all base stations (broadcasting terminals). Using the information transmitted from the BCCH the MS can determine various parameters required when first transmitting to a BS. Further, Parsa teaches that **the MS (user terminal) can start transmission at a number of well-defined time-offsets, relative to the frame boundary of a received broadcast channel** (see page 3, 0035, 0038).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Person's communication system by transmitting a message being timed relative to the first broadcast message as taught by Parsa in order to allow the mobile units (user terminals) efficiently utilize the acquired channel and avoid collision (0006, 0009).

Regarding claim 49, Persson discloses the method wherein the timing sequences are received with at least one frequency and wherein the method further comprises using the received timing sequences to determine a base station selection message frequency based on the frequency of the received timing sequences (column 8, line 64-column 9, line 12).

Regarding claim 50, Persson discloses the method wherein the message is transmitted omnidirectionally (column 5, lines 54-62).

Regarding claims 53-55, Persson discloses the method further comprising receiving broadcasting terminal identifiers on the broadcast channel, the broadcasting terminal identifiers each being associated with a respective timing sequence and using the broadcasting terminal identifiers to distinguish broadcasts from different broadcasting terminals on the broadcast channel (column 11, lines 8-18; column 7, lines 5-10).

Regarding claims 19, 25 and 56, Persson discloses all the claim limitations as stated above, except for a machine-readable medium.

Those skilled in the art will appreciate that the physical storage of the sets of instructions physically changes the medium upon which it is stored so that the medium carries machine-readable information.

Therefore, the system of Persson could be modified to use a machine-readable storage medium. At the time the invention was made, it would have been obvious to one ordinary skill in the art to add a machine-readable storage medium into the system of Persson.

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One of ordinary skill in the art would have been motivated to do this because programs can be changed and upgraded and new features are added easily than hardware changes.

Regarding claims 20, 26 and 57, Persson discloses the instruction causing the machine to perform further operations comprising transmitting broadcast messages in the broadcast channel at further specific times within further assigned slots of a predetermined frame from further base stations of the radio communications system, the further broadcast messages including a broadcast information sequence (column 5, lines 66-column 6, lines 2; column 7, lines 5-10).

Regarding claims 59-61, Persson discloses the instruction causing the machine to perform further comprising receiving base station identifiers on the broadcast channel, the base station identifiers each being associated with a respective timing sequence and using the base station identifiers to distinguish broadcasts from different base stations on the broadcast channel (column 11, lines 8-18; column 7, lines 5-10).

4. Claims 4, 5, 13, 14, 21, 32, 38, 45, 46, 51, 52, and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Persson et al. in view of Parsa et al. as applied to claims 1, 10, 19, 30, 36, 43, 48 and 56 above, and further in view of Dunn et al. (US 6,591,103).

Persson in view of Parsa discloses all the claim limitations as stated above; except for the specific transmission times are determined based on a common timing reference (a satellite clock transmission) received by each base station.

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Dunn teaches that using a shared command channel participating networks (from their local base stations) may broadcast their location, frequency availability and bandwidth price. User devices which wish to make connections and which know their location either through GPS or manual entry, or through other means, can determine which base stations are sufficiently close to make a carrier selection and a protocol selections based from the common channel information. Those skilled in the art will appreciate that radio communication systems have unsynchronized base stations, i.e., base stations that do not share a common timing reference signal.

It would have been obvious to one ordinary skill in the art at the time the invention was made to use the teachings from Dunn of a common timing reference in the system of Persson in view of Parsa. One of ordinary skill in the art would have been motivated to do this because using a common timing reference allows the base stations to synchronize.

5. Claims 6, 7, 15, 16, 22, 27, 33, 39, 40 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Persson et al. in view of Parsa et al. as applied to claims 1, 6, 10, 19, 25, 30, 36, and 43 above, and further in view of Almgren et al. (US 6,212,384).

Persson in view of Parsa discloses all the claim limitations as stated above, except for the broadcast information sequence includes a code (color code) to identify the base station.

Almgren teaches that a base station color code (BCC) identifies a particular base station to distinguish between respective BTSs using the same BCCH frequencies (column 7, line 61- column 8, line 10).

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It would have been obvious to one ordinary skill in that art at the time the invention was made to use the teachings from Almgren of adding BCC to the frame in the timeslot disclosed by Persson in view of Parsa. One of ordinary skill in the art would have been motivated to do this because adding BCC allows the user to accurately identify candidate base stations for which it is making received signal strength measurements.

Allowable Subject Matter

6. Claims 8, 9, 17, 18, 23, 24, 28, 29, 34, 35, 41, and 42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments with respect to claims 1-61 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saba Tsegaye whose telephone number is (571) 272-3091. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ST
February 17, 2006



JOHN PEZZLO
PRIMARY EXAMINER